

ABSTRACT OF THE DISCLOSURE

Surface-enhanced spectroscopy, such as surface-enhanced Raman spectroscopy employs aggregates that are of a size that allows easy handling. The aggregates are generally at least about 500 nm in dimension. The aggregates can be made of metal particles of size less than 100 nm, allowing enhanced spectroscopic techniques that operate at high sensitivity. This allows the use of larger, easily-handleable aggregates. Signals are determined that are caused by single analytes adsorbed to single aggregates, or single analytes adsorbed on a surface. The single analytes can be DNA or RNA fragments comprising at least one base.